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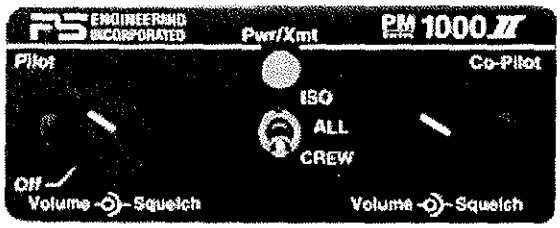


PM1000*II*

4-Place, Panel-Mounted Intercom

Pilot's Guide

Part Number 11920 (with Crew) and 11922 (without Crew)
FAA-Approved TSO C50c
July 2001
202-123-0001 Revision 1

Flying Never Sounded So Good! ™

Section I General Information

1.1 Introduction

The **PM1000*II***, is an FAA-TSO approved, panel mounted, 4-place intercom system (ICS). Please read this manual completely to become familiar with all the features.

This manual contains operational instructions for the following PS Engineering units:

Model	Description	Part Number
PM1000*II*	4-place intercom system w/Pilot ISO	11922
PM1000*II*	Same as above w/internal crew	11920

1.2 Description

The **PM1000*II*** is a 4-place, panel-mounted intercom with individual volume and squelch controls for the pilot and copilot.

Both pilot and copilot have transmit capabilities over the radio. The **PM1000*II*** allows only the person who presses their PTT to be heard over the aircraft radio. If both pilot and copilot press the PTT at the same time, the copilot will override (Ideally suited for training environments). Pilot regains priority by switching the unit off.

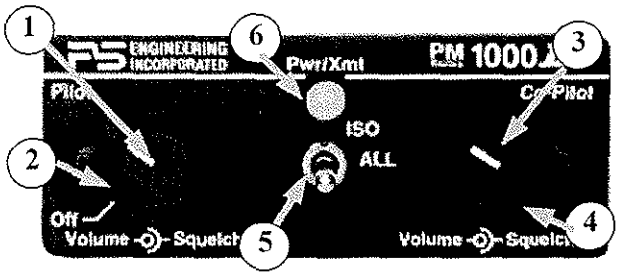
1.3 Approval Basis

The **PM1000*II***, part numbers 11920 and 11922 are FAA-approved under TSO-C50c.

1.4 Specifications

Input power:	13.8 - 27.5 Volts DC
Current Drain:	< 250 mA (1 Amp Circuit breaker)
Headphone Impedance:	150-1000 ohms typical
Audio Distortion:	<10% @ 75 mW into 150 Ω load
Aircraft Radio Impedance:	1000 Ω typical
3 dB Mic Frequency Response:	350 Hz — 6000 Hz
3 dB Music Frequency Response:	200 Hz to 15 kHz
Unit weight:	12 Ounces (0.342 kg)
Dimensions:	1.25" H x 2.60" W x 5.50" D (3.2 x 6.6 x 14 cm)
Environmental and technical qualifications:	RTCA DO-160B/DO-170
Temperature	-20°C to +55°C
Altitude	50,000 ft.

Section II OPERATION



PM1000II with ISO/ALL (p/n 11922)

1 Pilot Volume Control
2 Pilot Squelch Control
3 Copilot Volume Control
4 Copilot Squelch Control
5 Intercom Mode Switch
6 Power/Transmit indicator

Turn the PM1000II on by rotating pilot's volume control (1). This also engages the automatic fail-safe system. The pilot's volume control does not control the volume of the aircraft radio, allowing an additional degree of aircraft radio listening flexibility.

2.1 Adjusting The Volume (1, 3)

The pilot's volume control knob (1) adjusts the loudness of the intercom and music for the pilot's headset only. It has no effect on aircraft radio volume level. The copilot's volume control (3) adjusts the volume for the copilot.

In the 11920 (PM1000II with Crew) units, the volume level for both passengers can be adjusted by a screwdriver adjusted potentiometer located on the left hand side of the intercom as viewed from the front. It is possible to adjust the overall output power to the passenger headsets by changing this potentiometer. Rotating the potentiometer counterclockwise increases the passenger volume.

2.2 Squelch Control (2, 4)

The PM1000II provides individual VOX circuits for the pilot and copilot. The ability to adjust the trip level of these VOX circuits (squelch control)

allows the use of dissimilar headsets without the frustration of clipping the first syllables. The PM1000II has three squelch circuits, one for the pilot, copilot, and one for the passengers. With individual VOX circuits, background noise is dramatically reduced.

With the engine running, set the squelch control by slowly rotating the knob(s) (2) and (4) clockwise until you no longer hear the background noise in the earphones. When the microphone is positioned properly near the lips, normal speech levels should open the channel. When you have stopped talking, there is a delay of about one second before the channel closes. This prevents squelch closure between words, and helps eliminates choppy intercom conversations.

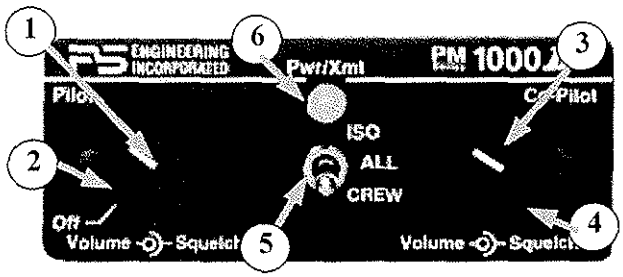
2.3 Mode Selector (5)

The center switch (5) is a three position mode control that allows the pilot to tailor the intercom function to suit flight conditions. Regardless of configuration, the pilot will always hear the aircraft radio. NOTE: If there is a power failure to the PM1000II, or if the power switch is turned off, the copilot will not hear the aircraft radio. Only the pilot is connected directly to the aircraft radio.

ISO (*Up Position*): The pilot is isolated from the intercom and is connected only to the aircraft radios. He will hear the aircraft radio reception (and sidetone during radio transmissions). Copilot and passengers will hear themselves and music but not the aircraft radio traffic.

ALL (*Middle position*): All parties will hear the aircraft radio, transmit sidetone from radio, intercom, and music. However, during any ICS or radio communications, the music volume automatically mutes. The music volume increases gradually back to the original level after communications have been completed.

Units without CREW mode (part number 11922) have a bottom switch position. This is the same as ALL mode.



PM1000II, p/n 11920, Front Panel Controls

CREW (*Down Position*) (ONLY version with crew, part number **11920**): Pilot and copilot are connected on one intercom channel, can hear aircraft radio and transmit sidetone. The passengers are on a separate and independent channel. The pilot and copilot are connected to the aircraft radio and may listen to Music #1. Passengers can continue to communicate with themselves without disturbing the pilot and copilot and may listen to Music #2.

2.3.1 Entertainment Mute Trip Level

The entertainment mute trip level determines what volume the aircraft radio must be before the music mutes. This is factory adjusted. If your entertainment does not mute, try increasing the volume of the aircraft radios.

2.4 Power/Transmit indicator (6)

When the PM1000II is operating, the lamp in the center will glow green. When either pilot pushes a radio microphone key (push to talk, or P-T-T), the indicator will change to red, signifying radio transmission.

The aircraft radio sidetone will be presented to the intercom, and heard by the same people as the aircraft radio receiver audio.

Only the pilot pressing a P-T-T will be heard on the radio, other microphones will be inhibited.

2.5 Fail-safe (1)

If any abnormal conditions occur, such as a loss of radio communication, bypass the PM1000II by placing it in the "fail-safe" mode. When the PM1000II is turned off, either by the pilot volume control (1) or by pulling the "intercom" circuit breaker, the unit automatically enters the fail-safe mode. In this mode the pilot microphone input is connected to the aircraft radio output, and the aircraft radio phones input is connected to the pilot headphone output, enabling pilot radio communication. The copilot and passenger' stations are inoperative.

Section 3
Warranty and Service

3.1 Warranty

In order for the factory warranty to be valid, the installations in a certified aircraft must be accomplished by an FAA- certified avionics shop and authorized PS Engineering dealer.

PS Engineering, Inc. warrants this product to be free from defect in material and workmanship for a period of one year from the date of installation. During this one year warranty period, PS Engineering, Inc., at its option, will send a replacement unit at our expense if the unit should be determined to be defective after consultation with a factory technician. The customer is responsible for return shipment costs.

This warranty is not transferable. Any implied warranties expire at the expiration date of this warranty. PS Engineering SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. This warranty does not cover a defect that has resulted from improper or unreasonable use or maintenance as determined by us. This warranty is void if there is any attempt to dissemble this product without factory authorization. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusions may not apply to you.

3.2 Factory Service

The **PM1000*II*** is covered by a one-year limited warranty. See warranty information.

The unit is covered by a one-year limited warranty. See warranty information. Call PS Engineering, Inc. at (865) 988-9800 before you return the unit. This will allow the service technician to provide any other suggestions for identifying the problem and recommend possible solutions.

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